IN THE CLAIMS:

Please reconsider the claims as follows:

1. (currently amended) A method for controlling Raman gain tilt in a WDM optical communication system, comprising:

determining a first spectral profile of an input WDM optical signal;

filtering the WDM optical signal to produced a filtered WDM optical signal having a second spectral profile;

determining an average loss between the input WDM optical signal and the filtered WDM optical signal using said first and second spectral profiles; and

if the average loss varies, adjusting a gain parameter of the optical communication system such that a respective average power of each of the optical channels present in the WDM optical signal remains substantially constant, wherein a change in the average loss is due to a transient event.

2. (original) The method of claim 1, wherein said second spectral profile comprises a substantially linearly increasing gain profile.

3. (original) The method of claim 1, wherein said second spectral profile comprises a substantially linearly decreasing gain profile.

4. (currently amended) The method of claim 1, wherein ~~a change in~~ the ~~average loss is due to a transient event and a~~ gain parameter of the optical communication system is adjusted such that the respective average power of each of the surviving optical channels remains substantially constant.

5. (original) The method of claim 1, wherein the gain of the optical communication system is adjusted by adjusting the gain of an amplifier of said optical communication system.

6. (original) The method of claim 1, wherein the filtering is performed in-line in the optical communication system and the gain of the optical communication system is adjusted by adjusting the filtering of said WDM optical signal.

7. (original) The method of claim 1, wherein an amount of gain adjustment required is proportional to the amount of change in the average loss.

8. (original) The method of claim 1, wherein the gain of the optical communication system is adjusted by a predetermined amount respective of the amount of change in the average loss.

9. (original) The method of claim 8, wherein said predetermined amount of gain adjustment is determined by a method, comprising:

determining an average loss between an input WDM optical signal and a filtered WDM optical signal for the case of when all optical channels are present in the WDM optical signal;

determining an average loss between an input WDM optical signal and a filtered WDM optical signal for all other possible combinations of optical channels in the input WDM optical signal;

determining a respective amount of change in loss between the average loss for the case of when all optical channels are present in said WDM optical signal and the average loss for each of the combinations of optical channels;

for each determined amount of change in loss, determining an amount of gain adjustment necessary for the optical communication system such that a respective average power of each of the optical channels present in the input WDM optical signal remains substantially constant; and

associating each determined amount of change in loss with a respective determined amount of gain adjustment necessary for the optical communication system.

10. (currently amended) An optical communication system, comprising:

a first optical detector for determining a first spectral profile of an input WDM optical signal;

a filter for filtering the WDM optical signal to produced a filtered WDM optical signal having a second spectral profile;

a second optical detector for determining the second spectral profile of the filtered WDM optical signal; and

a controller comprising a memory and a processor, said controller adapted to perform the steps of:

determining an average loss between the WDM optical signal and the filtered WDM optical signal using said first and second spectral profiles; and

if the average loss varies, generating a control signal to adjust a gain parameter of the optical communication system such that a respective average power of each of the optical channels present in the WDM optical signal remains substantially constant<u>, wherein a change in the average loss is due to a transient event</u>.

11. (original) The optical communication system of claim 10, further comprising an outside plant fiber for propagating said input WDM optical signal to said first optical detector.

12. (original) The optical communication system of claim 10, wherein said first optical detector and said second optical detector comprise optical monitors.

13. (original) The optical communication system of claim 10, further comprising an optical amplifier for amplifying the WDM optical signal such that the power per channel of the WDM optical signal remains substantially the same independently of how many channels are in the WDM optical signal.

14. (original) The optical communication system of claim 13, wherein the gain of said optical communication system is adjusted by adjusting the average gain of said amplifier via said generated control signal.

15. (original) The optical communication system of claim 13, wherein said amplifier comprises an erbium-doped fiber amplifier (EDFA) comprising a pre-amplifier and a post amplifier.

16. (original) The optical communication system of claim 15, wherein the gain of said optical communication system is adjusted by adjusting the gain of said pre-amplifier of said EDFA via said generated control signal.

17. (original) The optical communication system of claim 15, wherein the gain of said optical communication system is adjusted by adjusting the gain of said post amplifier of said EDFA via said generated control signal.

18. (original) The optical communication system of claim 10, wherein said filter is in-line in said optical communication system and the gain of said optical communication

system is adjusted by adjusting the filtering of said in-line filter via said generated control signal.

19. (original) The optical communication system of claim 18, wherein said in-line filter further comprises an optical attenuator.

20. (original) The optical communication system of claim 19, wherein the gain of said optical communication system is adjusted by adjusting said optical attenuator via said generated control signal such that the average power of each of the optical channels present in the optical signal remains substantially constant.

21. (original) The optical communication system of claim 10, wherein said filter comprises a pre-tilt filter.

22. The optical communication system of claim 10, further comprising at least one counter-propagating Raman pump block and at least one co-propagating Raman pump block for amplifying the WDM optical signal.

23. (original) The optical communication system of claim 22, wherein the gain of said optical communication system is adjusted by adjusting the power of said at least one counter-propagating Raman pump block via said generated control signal.

24. (original) The optical communication system of claim 22, wherein the gain of said optical communication system is adjusted by adjusting the power of said at least one co-propagating Raman pump block via said generated control signal.

25. (original) The optical communication system of claim 22, wherein the gain of said optical communication system is adjusted by adjusting the power of a combination of said at least one counter-propagating Raman pump block and said at least one co-propagating Raman pump block via said generated control signal.

26. (original) The optical communication system of claim 10, further comprising a dispersion compensating module for providing dispersion compensation for the WDM optical signal propagating in the optical communication system.

27. (currently amended) An apparatus comprising a memory and a processor, said apparatus adapted to perform the steps of:

determining an average loss between a WDM optical signal and a filtered WDM optical signal; and

if the determined average loss varies, generating a control signal to adjust a gain parameter of an optical communication system such that a respective average power of each of the optical channels present in the WDM optical signal remains substantially constant<u>, wherein a change in the average loss is due to a transient event</u>.

28. (currently amended) An optical communication system, comprising:

a means for determining a first spectral profile of an input WDM optical signal;

a means for filtering the WDM optical signal to produced a filtered WDM optical signal having a second spectral profile;

a means for determining the second spectral profile of the filtered WDM optical signal;

a means for determining an average loss between the WDM optical signal and the filtered WDM optical signal using said first and second spectral profiles; and

a means for generating, if the average loss varies, a control signal to adjust a gain parameter of the optical communication system such that a respective average power of each of the optical channels present in the WDM optical signal remains substantially constant, <u>wherein a change in the average loss is due to a transient event</u>.

29. (original) The optical communication system of claim 28, wherein said second spectral profile comprises a substantially linearly increasing gain profile.

30. (original) The optical communication system of claim 28, wherein said second spectral profile comprises a substantially linearly decreasing gain profile.